



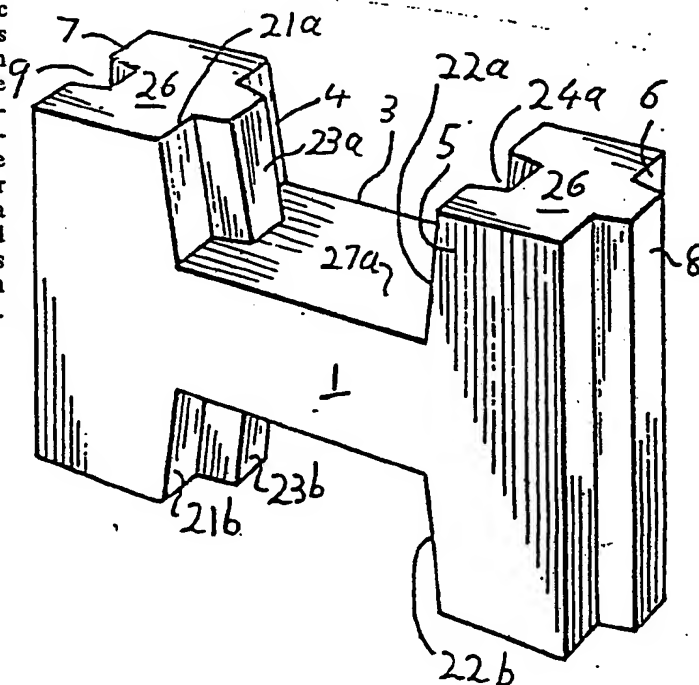
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(54) Title: BRICKS OR BLOCKS

(57) Abstract

A brick or block which, in a specific orientation, is generally H-shaped (1) in perimetric profile when seen in a first elevation (Fig. 3), is generally rectangular in perimetric profile when seen in a second elevation at right angles to the first elevation, is generally rectangular in perimetric profile when seen in plan (Fig. 4) and in bottom view, and wherein the end flank (6) of one upright (5), and the end (7) flank of the other upright (4), of the H-shape have, respectively, a projection (8) and a recess (9) shaped and located such that when a number of such bricks or blocks are oriented and stood in side-by-side relation the projections (8) will engage in the recesses (9).



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TITLE: "BRICKS OR BLOCKS"

1.

This invention relates to bricks or blocks.

In one aspect, this invention relates to bricks or blocks for building buildings. In another aspect this invention relates to toy bricks or blocks. In this respect, the concept of invention can be applied both to real life building and to toys for children.

The present invention provides a brick or block which, in a specific orientation, is generally H-shaped in perimetric profile when seen in a first elevation, is generally rectangular in perimetric profile when seen in a second elevation at right angles to the first elevation, is generally rectangular in perimetric profile when seen in plan and in bottom view, and wherein the end flank of one upright, and the end flank of the other upright, of the H-shape have, respectively, a projection and a recess shaped and located such that when a number of such bricks or blocks are oriented and stood in side-by-side relation the projections will engage in the recesses.

Preferably, the spacing between the uprights of the H-shape is such that the adjacent uprights of two such bricks or blocks in such side-by-side relation may fit between said uprights of the H-shape of another such brick or block.

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2.

Preferably, the inside flanks of the uprights of the H-shape have similar projections and recesses to the end flanks but the arrangement is most desirably that that upright which has, respectively, a recess or
5 a projection on its end flank has, respectively, a projection or a recess on its inside flank.

The inside flanks are preferably inclined such as to be divergent towards the top and bottom of the H-shape away from the cross-bar thereof.

10 The projections are preferably upstanding ribs and the recesses are preferably grooves. The ribs and grooves may be of any desired cross-section but rounded, square and rectangular are preferred. The projections and recesses can preferably make a
15 sliding fit with one another.

The brick or block may be hollow or solid.

It is also possible to provide half-bricks or half-blocks of a variety of forms to suit requirements. In this respect, some half-bricks or -blocks
20 may be considered to be halved by a vertical slice or horizontal slice through the cross-bar of the H-shape. Half-bricks or -blocks may have similar projections and recesses to enable them to interfit to form whole bricks and blocks. Quarter-bricks or -blocks may
25 also be provided and it is possible to build bricks or blocks to suit corners of buildings.

The bricks or blocks of this invention may be made of any suitable material. Preferred materials are synthetic plastics materials in the case of toys
30 and cement, concrete or other cementitious material or clay in the case of building bricks or blocks.

The bricks or blocks may be laid with or without mortar. If they are to be laid with mortar

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they should be sized to allow for the mortar thickness. If laid without mortar then they should interfit with only a small gap. If used without mortar a sealing compound such as a bitumastic material or silicone rubber may be used to seal. It is preferred not to use mortar.

The bricks or blocks of this invention can be made in any convenient way. If of synthetic plastics material they may be injection moulded. If of cement or other wet mixed material they may be cast or moulded.

Specific constructions of bricks or blocks in accordance with this invention will now be described with the aid of the accompanying drawings in which:

Figure 1 is a view from one side and above of one brick or block,

Figure 2 is a view from the other side and below of the brick or block of Figure 1,

Figure 3 is a side elevation of the brick or block of Figure 1,

Figure 4 is a top plan view of the block of Figure 1,

Figure 5 is a view from one side and above of a second brick or block,

Figure 6 is a view from one side and above of a third brick or block,

Figure 7 is a view from one side and above of two different half bricks,

Figure 8 is a view from one side and above of a corner brick or block,

Figure 9 is a view from one side and above of another brick or block,

Figure 10 is a view from one side and above of another brick or block,

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4.

Figure 11 is a view of a construction made from blocks in accordance with this invention,

Figure 12 is a view of another construction made from blocks in accordance with this invention,

5 Figure 13 is a view from one side and above of another brick or block,

Figure 14 is a top plan view of the brick or block of Figure 13, and

10 Figures 15 - 18 are top plan views of further bricks or blocks which are variants on the brick or block shown in Figures 13 and 14.

15 The block 10 shown in Figures 1, 2, 3 and 4 is generally H-shaped in side elevation (Figs. 1, 2 and 3), is generally rectangular in end elevation and is generally rectangular in plan (Fig. 4).

20 The block shown in Figures 1, 2, 3 and 4 has two H-shaped faces 1 and 2, a cross-bar 3, uprights 4 and 5, end flanks 6 and 7 which carry, respectively, a projection 8 and a groove 9, inside flanks 21 (a & b) and 22 (a & b) which are outwardly divergent away from the cross-bar 3, projections 23 (a & b) and grooves 24 (a & b) which are also outwardly divergent away from the cross-bar 3, end faces 26 and cross-bar upper and lower faces 27 (a & b).

25 The block of Figure 5 is similar to that of Figures 1, 2, 3 and 4 excepting that it is hollow between its end faces 26.

30 The block 41 of Figure 6 is not of general H-shape but its upper end conforms to the shape of the block of Figures 1, 2, 5, 6 and 7 while its bottom may be considered to be filled in. It will be found useful as the lowest course of a course of bricks.

1111 The half blocks 31 and 32 of Figure 4 are,



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together, similar to the block of Figures 1, 2, 3 and 4 but the cross-bar can be considered to be divided such that the block 31 has a projection 33 while the block 32 has a recess 34.

5 Half blocks such as 31 and 32 will be useful in building; for instance, the half block 31 could be used to fill the space X in Figure 11.

10 The block 42 of Figure 8 is not of general H-shape but its ends conform to the shape of the block of Figures 1, 2, 3 and 4. It will be found useful in forming corners of buildings.

 The block 43 of Figure 9 is the same as that of Figures 1, 2, 3 and 4 excepting that in plan view it is arcuately curved.

15 The block 44 of Figure 10 is the same as that of Figure 6 excepting that in plan view it is arcuately curved. The block of Figure 10 can perform the same functions with respect to the block of Figure 9 as can the block of Figure 6 with
20 respect to the block of Figures 1, 2, 3 and 4.

 The block 46 of Figures 13 and 14 is not of general H-shape but its ends 47 and 48 have a projection 8 and a groove 9 similarly as with respect to Figures 1, 2, 3 and 4.

25 The blocks 51-54 of Figures 15-18 are similar to the block of Figures 13 and 14 but have different conformations and/or numbers of projections 8 and grooves 9.

30 Other bricks or blocks which will be found to be of use are those of T-shape or cruciform plan as these can be used at intersections of walls.

 Figures 11 and 12 show structures which can be built using bricks or blocks in accordance with

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this invention. Spaces created may be filled with bricks or blocks of shape designed to fill those spaces.

Reference is again made to the brick or
5 block shown in Figure 5 which, apart from the hollow between its end faces 26 is identical in shape to the brick or block shown in Figures 1, 2, 3 and 4. Dimensions are shown on Figure 5 and are
a = 100, b = 300, c = 100, d = 190, e = 94.5, f = 105,
10 g = 39, h = 30, i = 100, j = 100, k = 40, l = 29.5, m = 94.5 and n = 400. Further, the projection 8, 23a and 23b project equal to 29.5 and the depth of the grooves 9, 24a and 24b are 30.5. Those dimensions should be considered as parts by length. However, if
15 those dimensions are considered to be in millimeters then a brick or block of convenient size will result. The dimensions given can be scaled up or down from millimeters if desired and some departure is possible.

The above described bricks or blocks are
20 cheap to make and are easy to lay. Indeed, laying can be done by unskilled persons.

A modified brick or block shown in
Figures 19 - 22, which are, respectively, perspective view from above and one side, perspective view from
25 below and other side, side view and plan view, has recesses at 81, 82, 83 and 84 and upstanding lands at 85 and 86. The recesses and lands enable additional keying engagement.

Modifications and adaptations may be made
30 to the above described without departing from the spirit and scope of this invention which includes every novel feature and combination of features disclosed herein.

The claims form part of the disclosure of
35 this specification.

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CLAIMS

1. A brick or block which, in a specific orientation, is generally H-shaped in perimetric profile when seen in a first elevation, is generally rectangular in perimetric profile when seen in a second elevation at right angles to the first elevation, is generally rectangular in perimetric profile when seen in plan and in bottom view, and wherein the end flank of one upright, and the end flank of the other upright, of the H-shape have, respectively, a projection and a recess shaped and located such that when a number of such bricks or blocks are oriented and stood in side-by-side relation the projections will engage in the recesses.
2. A brick or block as claimed in claim 1, wherein the spacing between the uprights of two such bricks or blocks in such side-by-side relation may fit between said uprights of the H-shape of another such brick or block.
3. A brick or block as claimed in claim 1 or claim 2, wherein the upright which has, respectively, a recess or a projection on its end flank has, respectively a projection or a recess on its inside flank.

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4. A brick or block as claimed in any preceding claim, wherein the inside flanks of the uprights of the H-shape are inclined such as to be divergent towards the top and bottom of the H-shape away from the cross-
5 bar thereof.
5. A brick or block as claimed in any preceding claim, wherein the projections are upstanding ribs and the recesses are grooves.
6. A brick or block as claimed in any preceding
10 claim and made of cement, concrete or other cementitious material or clay..
7. A brick or block as claimed in any preceding claim excepting that the brick or block is arcuately curved when seen in plan and in bottom view.
- 15 8. A brick or block substantially as herein- before described with reference to any one of the accompanying drawings.
9. The articles, things, parts, elements,
steps, features, methods, processes, compounds and
20 compositions referred to or indicated in the specification and/or claims of the application individually or collectively, and any and all combinations of any two or more of such.

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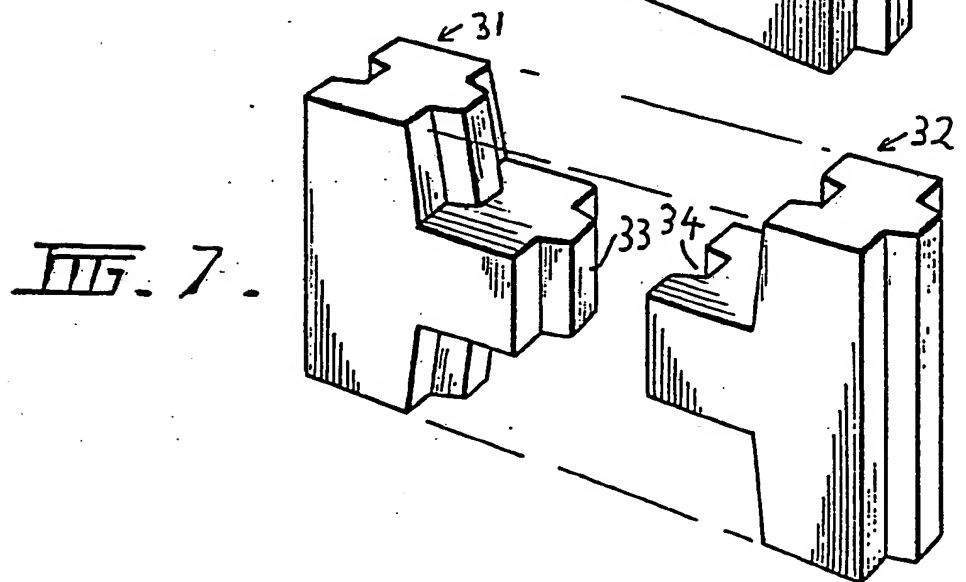
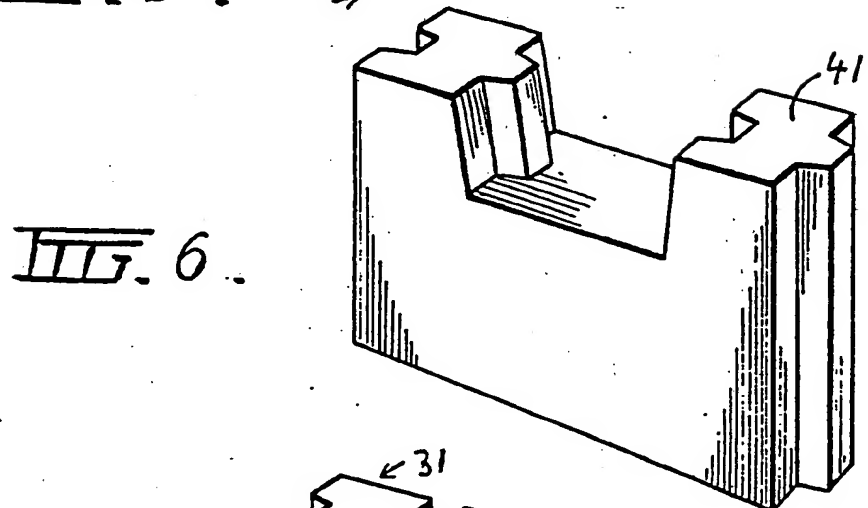
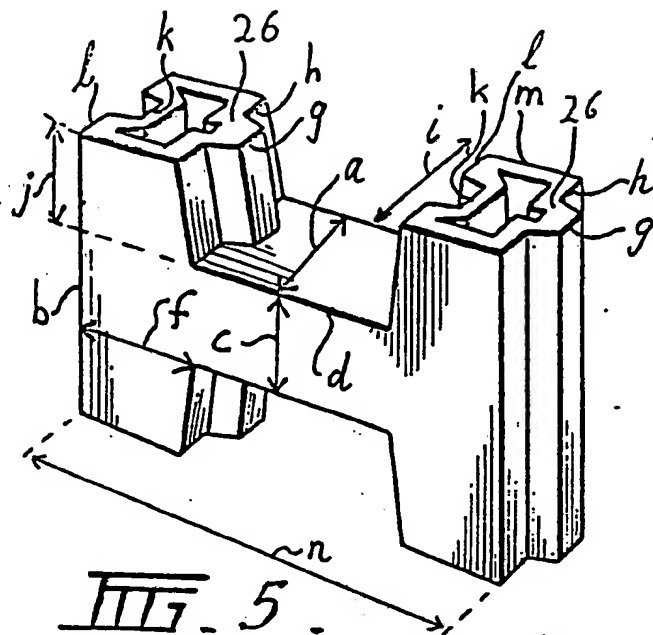


FIG. 8.

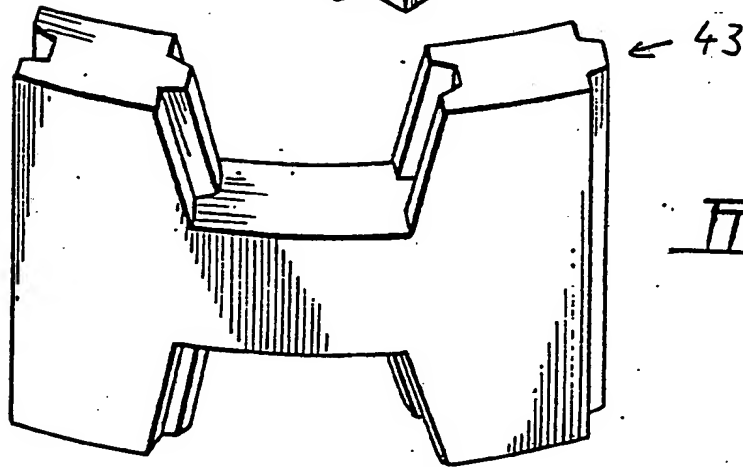
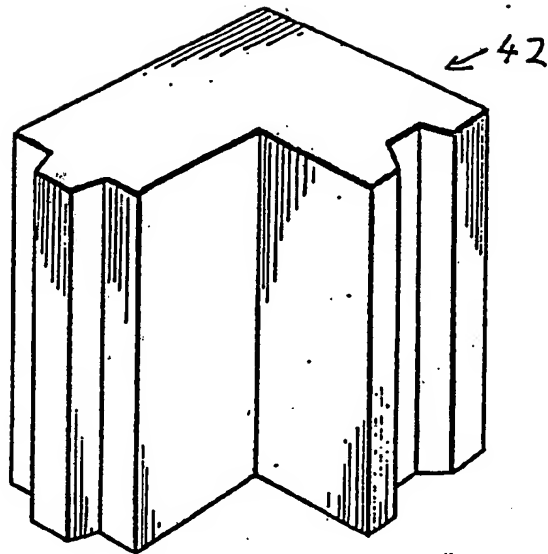
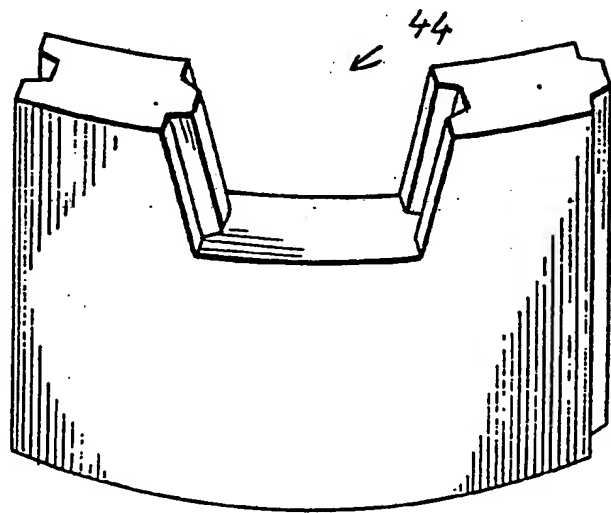
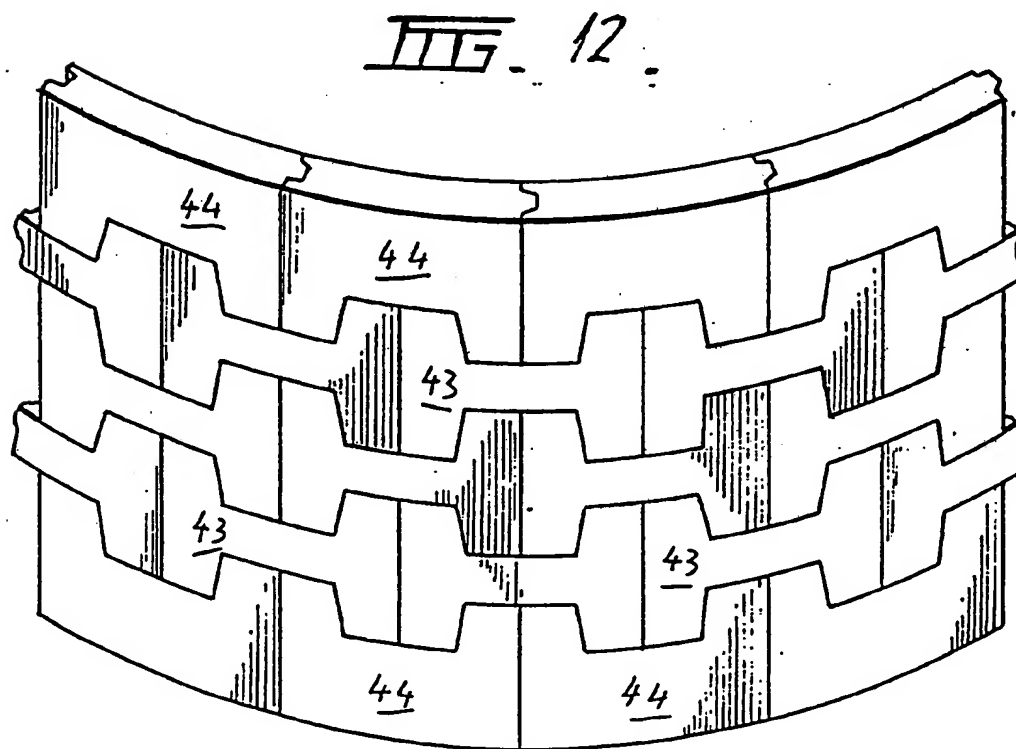
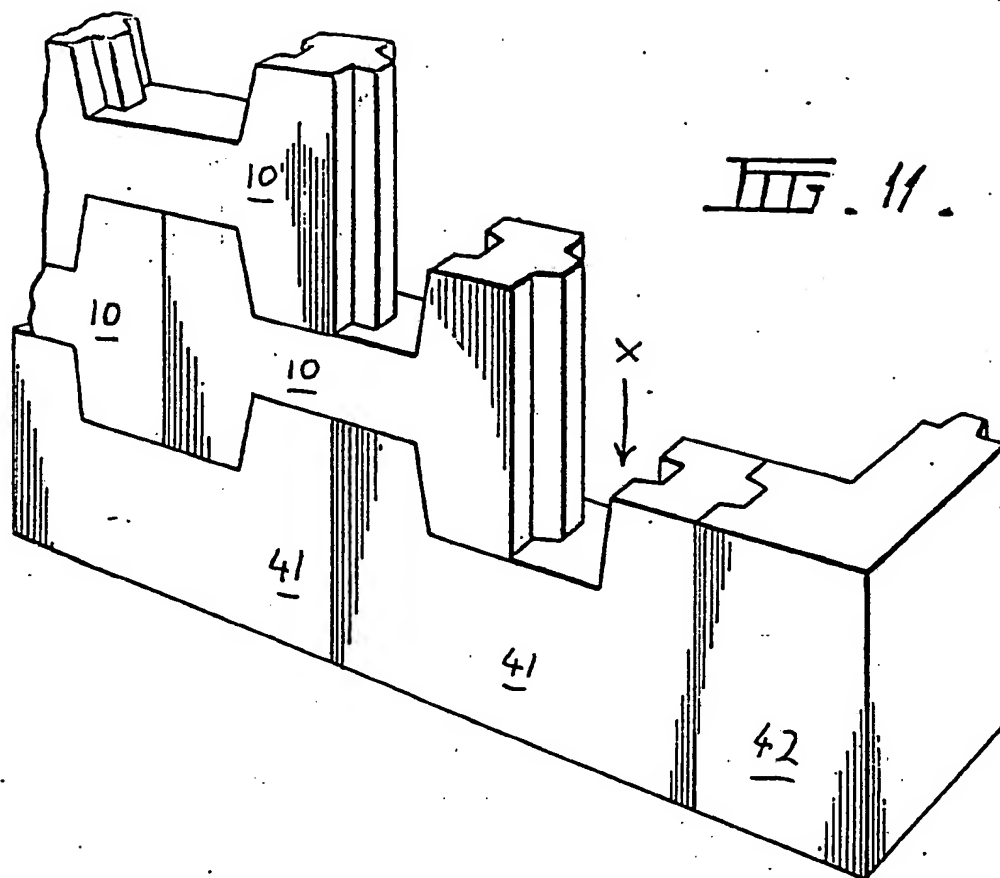


FIG. 9.

FIG. 10.





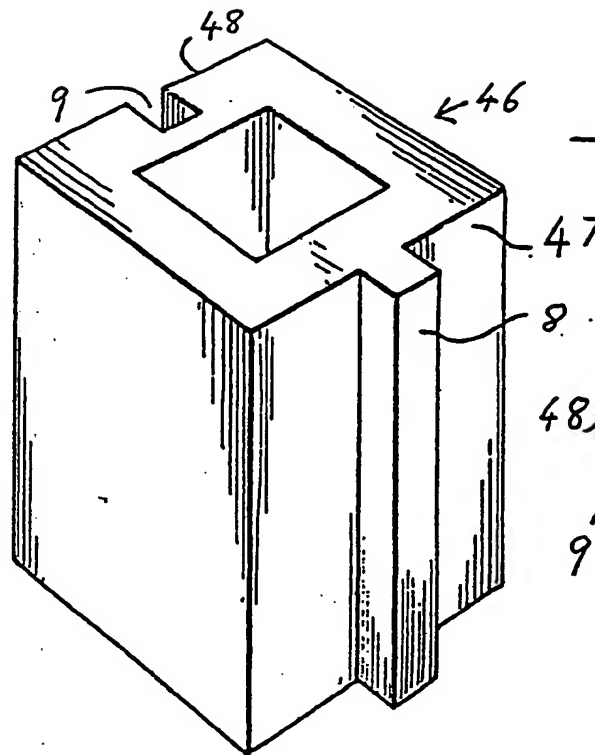


FIG. 13.

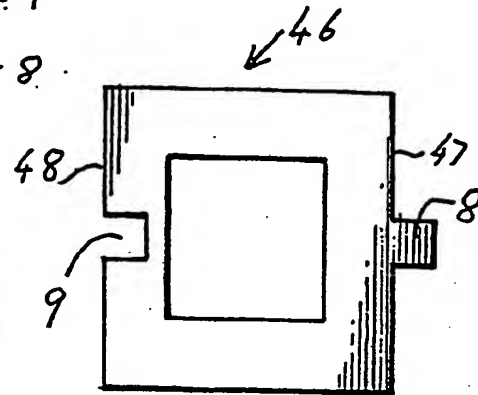


FIG. 14.

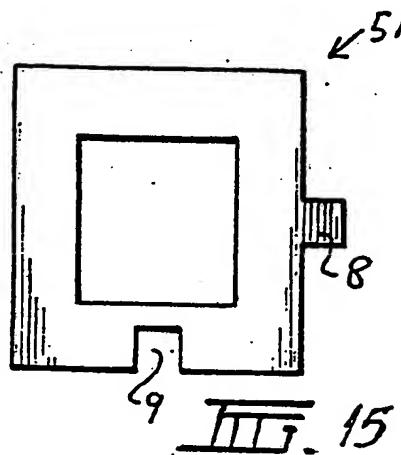


FIG. 15.

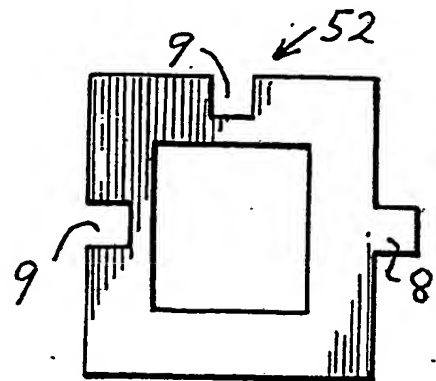


FIG. 16.

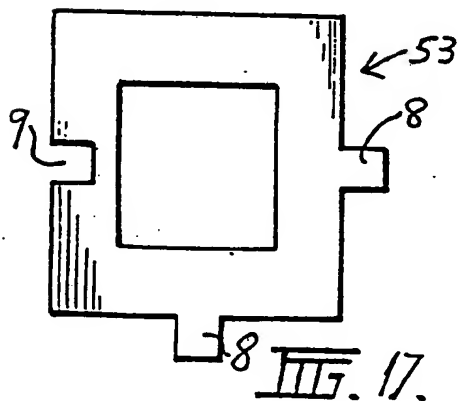


FIG. 17.

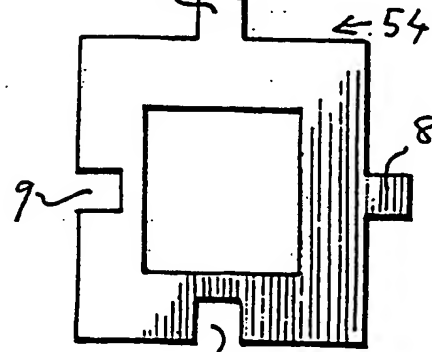


FIG. 18.

FIG. 19.

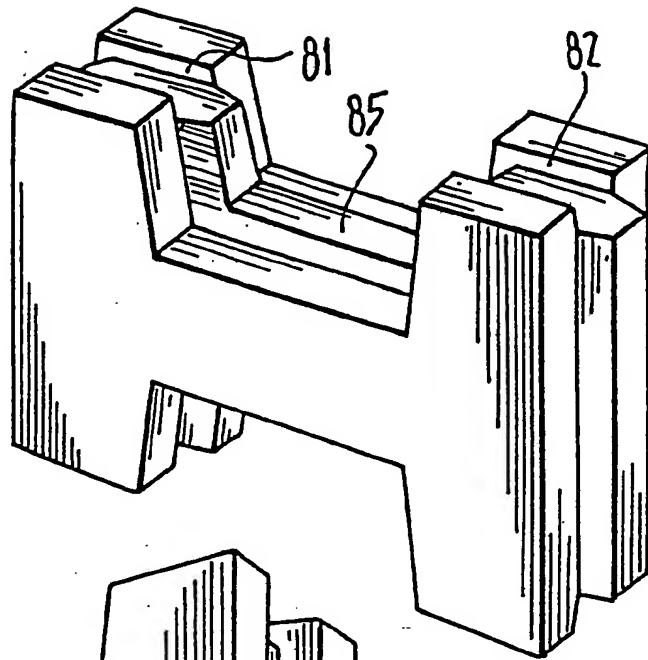


FIG. 20.

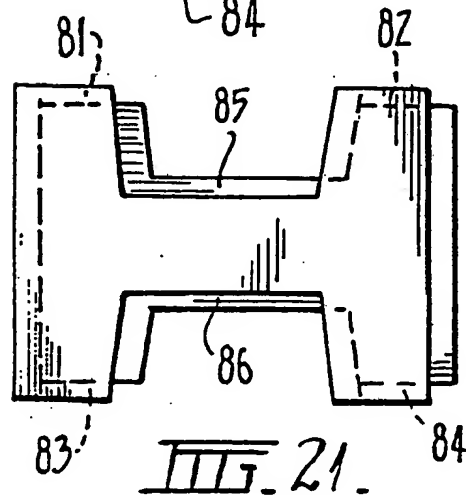
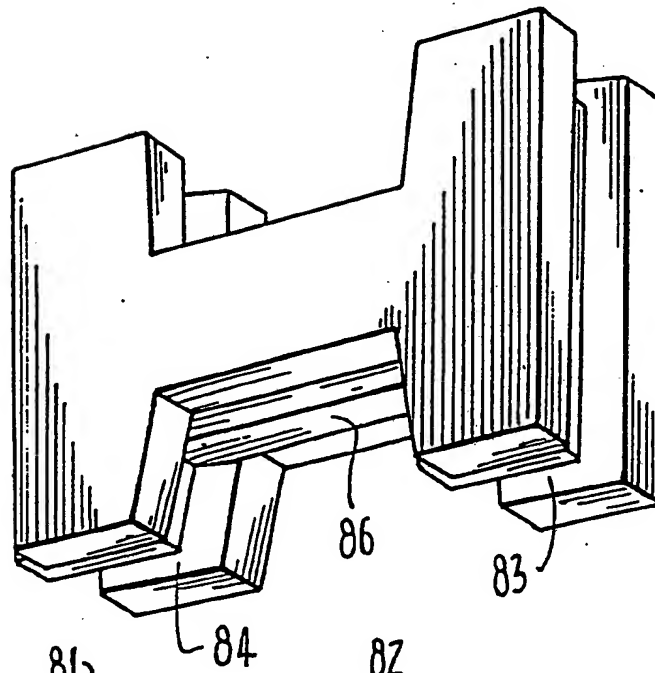


FIG. 21.

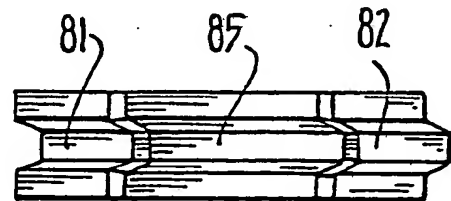


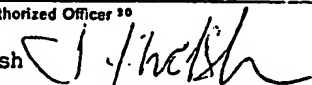
FIG. 22.

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INTERNATIONAL SEARCH REPORT

International Application No PCT/AU 81/00047

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| Int. Cl. ³ A63H 33/08, E04C 1/10 | | |
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| AU: IPC as above. | | |
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| Category * | Citation of Document, ¹⁶ with indication, where appropriate, of the relevant passages ¹⁷ | Relevant to Claim No. ¹⁸ |
| X | AU, B, 7791/42 (119434), published 1942, December 24, R.G. Meldrum, B.W. Johns | 1,2 |
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| Date of the Actual Completion of the International Search ¹⁹ | | Date of Mailing of this International Search Report ²⁰ |
| 29 MAY 1981 (29.05.81) | | (04-06-81) 04 JUNE 1981 |
| International Searching Authority ¹ | | Signature of Authorized Officer ²⁰ |
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|---|---|---------------------|----------------------------|---------------------|
| US 1367497 | A | 01-02-1921 | NONE | |
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